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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,610	02/06/2002	Roger A. Stern	39238-0747	2778

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EXAMINER	
VRETTAKOS, PETER J	
ART UNIT	**PAPER NUMBER**
3739	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,610	STERN ET AL.	
	Examiner	Art Unit	
	Peter J Vrettakos	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. **Claims 21, 22, 23, 34, 39 and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification is not sufficiently descriptive toward the claim language (ex. trace components; tare button).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-7,9, 11, 19, 42, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Heim (US 5,707,402).**

Independent claim 1

Heim discloses a handpiece (100), comprising:

a handpiece assembly including a handpiece housing (102) and a cooling fluidic medium valve member (34, 46; col. 5:20); and an electrode assembly (104) coupled to the handpiece housing, the electrode assembly including a least one RF electrode (106) that is capacitively coupled (inherent) to a skin surface when at least a portion of the RF electrode is in contact with the skin surface (see figures 1-4, "TR").

Dependent claims (parentheticals refer to Hiem)

2. The handpiece of claim 1, further comprising:

a fluid delivery member (120) coupled to the cooling fluidic medium valve member, wherein the fluid delivery member is configured to provide an atomizing delivery (col. 6:38-41) of a cooling fluidic medium to the RF electrode.

3. The handpiece of claim 2, wherein the fluid delivery member (120) is positioned in the handpiece housing (see figure 2).

4. The handpiece of claim 2, wherein the fluid delivery member (120) is positioned in the electrode assembly (see figure 2).

5. The handpiece of claim 2, wherein the fluid delivery member includes a nozzle (152, 156).

6. The handpiece of claim 2, wherein the fluid delivery member is configured to deliver a controllable amount of cooling fluidic medium to the RF electrode.

7. The handpiece of claim 2, wherein the fluid delivery member is configured to controllably deliver (col. 5:18-21) the cooling fluidic medium to a back surface of the RF electrode.

9. The handpiece of claim 2, wherein the fluid delivery member is configured to controllably deliver a cooling fluidic medium to a back surface of the RF electrode at substantially any orientation of the front surface of the RF electrode relative to a direction of gravity (permitted through "pressurized atomization", col. 3:12-13).

11. The handpiece of claim 1, wherein the electrode assembly includes a vent (the LMS is a "vent" as its purpose it to cool tissue/prevent overheating).

12. The handpiece of claim 1, wherein the cooling fluidic medium valve member is configured to provide a pulsed delivery ("of a cooling fluidic medium.

19. The handpiece of claim 1, further comprising: leads (50) coupled to the RF electrode.

42. The handpiece of claim 1, wherein the electrode assembly includes a cooling fluidic medium channel with an inlet and an outlet (depicted in figure 2).

48. The handpiece of claim 1, wherein the electrode assembly is coupled to the handpiece housing in a stationary position (see figure 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 8, 10, 14-18, 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Knowlton (US 5,755,753).

Heim neglects to expressly disclose dielectric materials.

(Parentheticals refer to Knowlton unless otherwise stated.)

Knowlton in an analogous device discloses including:

8. A handpiece wherein the fluid delivery member is configured to controllably deliver (col. 4:57-64) fluid to a backside ("substantially opposing to contacting exterior surface 22") of the RF electrode to evaporatively cool the RF electrode (26) and conductively cool a skin surface in contact with the front side of the RF electrode.

10. A handpiece wherein the electrode assembly is sufficiently sealed (awareness of differences in porosity disclosed col. 6:1-5) to minimize flow of a cooling fluidic medium from a back surface of the RF electrode to a skin surface in contact with a front surface of the RF electrode.

14. A handpiece wherein the RF electrode (26) includes a conductive portion (obvious to "electrode") and a dielectric (18) portion (col. 4:57-64).

15. A handpiece wherein the conductive portion includes metal (obvious to "electrode").

17. A handpiece wherein the dielectric portion includes polyimide (obvious variants found in Knowlton col. 5:57-61).

16. A handpiece of claim 14, wherein the conductive portion includes copper (obvious material choice for an "RF electrode").

18. The handpiece of claim 14, wherein the RF electrode includes a copper polyimide composite material (obvious composite material choice in light of Knowlton).

40. A handpiece wherein the RF electrode (26) includes a conductive portion (obvious to "electrode") with a dielectric (18) positioned around at least a portion of a periphery of the conductive portion (col. 4:57-64).

41. A handpiece wherein the RF electrode (26) includes a conductive portion (obvious to "electrode") with a dielectric (18) positioned around an entirety of a periphery of the conductive portion (col. 4:57-64).

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Knowlton by including the use of dielectric materials in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

4. Claims 38, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Kaufman (5,234,428).

Heim neglects to expressly disclose a shroud.

Kaufman discloses in an analogous device, a shroud.

(Parentheticals refer to Kaufman unless otherwise stated.)

38. The handpiece of claim 1, further comprising: a shroud coupled to the handpiece.

44. The handpiece of claim 1, wherein the electrode assembly is moveable within at least a portion of the handpiece housing.

45. The handpiece of claim 1, wherein the electrode assembly is slideably moveable within at least a portion of the handpiece housing.

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Kaufman by including the use of a shroud in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

5. Claims 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Fleenor (5,041,110).

Heim neglects to disclose a solenoid valve.

Fleenor discloses in an analogous device a solenoid valve.

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Fleenor by including the use of a solenoid valve in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

6. Claims 20, 24, and 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Imran (5,396,887).

Heim neglects to disclose a flex circuit.

Imran discloses in an analogous device a flex circuit (51) and force sensors (27,101). (Parentheticals refer to Imran unless otherwise stated.)

20. The handpiece of claim 1, wherein the RF electrode includes a flex circuit (51, figure 2).

24. The handpiece of claim 20, wherein the flex circuit include a force sensor (27, 101) coupled to the flex circuit.

26. The handpiece of claim 20, wherein the flex circuit includes a dielectric (polyimide 52, col. 67-68) that forms a portion of the RF electrode.

27. The handpiece of claim 1, further comprising: a force sensor (27, 101) coupled to the RF electrode.

28. The handpiece of claim 27, wherein the force sensor is configured to detect an amount of force applied by the RF electrode against a surface (obvious to the function of a pressure transducer as 27,101).

29. The handpiece of claim 27, wherein the force sensor is configured to zero out gravity effects of the weight of the electrode assembly (obvious to the function of a pressure transducer as 27,101).

30. The handpiece of claim 27, wherein the force sensor is configured to zero out gravity effects of the weight of the electrode assembly in any orientation of a front

surface of the RF electrode relative to a direction of gravity (obvious to the function of a pressure transducer as 27,101).

31. The handpiece of claim 27, wherein the force sensor is configured to provide an indication of RF electrode contact with a skin surface (see title of patent).

32. The handpiece of claim 27, wherein the force sensor is configured to provide a signal indicating that a force applied by the RF electrode to a contacted skin surface is below a minimum threshold (obvious to the function of a pressure transducer as 27,101).

33. The handpiece of claim 27, wherein the force sensor is configured to provide a signal indicating that a force applied by the RF electrode to a contacted skin surface is above a maximum threshold (obvious to the function of a pressure transducer as 27,101).

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Imran by including the use of a flex circuit in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

7. Claims 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Pike (5,396,887).

Heim neglects to disclose springs.

Pike discloses a spring-loaded electrosurgical pencil, analogous to Heim's invention.

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Pike by including the use of a spring-loaded design in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

8. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heim in view of Billings et al. (5,395,363).

Heim neglects to disclose an electrode assembly rotatably moveable/positioned relative to a handpiece housing.

Billings discloses in an analogous device an electrode assembly rotatably moveable/positioned relative to a handpiece housing.

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify Heim in view of Billings by including the use of rotatable electrodes

in an electrosurgical pencil/handpiece. The motivation would be to use a well-known design expedient (as evidenced by its presence in the prior art).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Vrettakos whose telephone number is 571-272-4775. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pete Vrettakos
March 7, 2005

Roy D. Gibson
ROY D. GIBSON
PRIMARY EXAMINER